Fast Forward - Falcon BMS

A Beginner's Guide for Falcon BMS 4.37

By Yuggs

Fast Forward

The purpose of this guide is to explain how to do the basics in Falcon BMS in a simple step-by-step way. It may not use proper names or methods but it will shorten the time it takes you to go from the ground to the air, fly around, hit some targets with different weapons, and land.

Thanks goes to the following for their amazing learning resources. Please check them out for more detailed information:

- Benchmark Sims   https://www.falcon-bms.com/
- Fisgas Fighties   https://www.youtube.com/@fisgasfighties
- Aviation Plus   https://www.youtube.com/@AviationPlus
- MaxWaldorf   https://www.youtube.com/@MaxWaldorf
- DualAccumulator   https://www.youtube.com/@dualaccumulator
- Revientor Reborn   https://www.youtube.com/@revientoreborn
- AngersGG   https://www.youtube.com/@angersgg

Sections

Preliminary Stuff

Instruction Format

Fast Forward Sequences

Preliminary Stuff

Really Useful Docs

The following docs can be found in the installation folder for Falcon BMS.

Maps of Gunsan Airport: Docs\03 KTO Charts\01 South Korea\Gunsan

Keyboard layout: Docs\01 Input Devices\01 Keyboard Layouts

Goals and Missions

Each fast forward sequence has a stated goal to clarify its purpose. It also has a mission description which describes how to setup the mission. For example:

Mission: Tactical Engagement > TR_BMS_01_GroundOPS > RAMP

The above mission description is stating that the fast forward sequence should be followed by going to the main menu of Falcon BMS, selecting "Tactical Engagement", then "TR_BMS_01_GroundOPS", then pressing "COMMIT", then pressing "TAKEOFF", and on the countdown screen selecting "RAMP".

Hiding the Pilot Model

The pilot model can obstruct the view of some controls, so it may be necessary to toggle it off. To toggle it on and off press Alt + C and then press P. This is also found in the Falcon BMS launcher's Keymapping section under [SIM: Toggle Pilot Model]

Body Reference

This guide uses a body reference to refer to areas of the cockpit. It is designed to help people who are unfamiliar with cockpit control layouts, but who are hopefully familiar with their own bodies, quickly find control locations:

- **Heads Up Display (HUD)** - the green screen directly across from your head
- **Chest** - the front controls in-line with the center of your chest
- **Left/right armpit** - the front controls in-line with your left and right armpits
- **Crotch** - the front controls in-line with your crotch
- **Left/right knee** - the side controls near your knees
- **Left/right thigh** - the side controls near your thighs
- **Left/right butt cheek** - the side controls near your butt cheeks

Instruction Format

Each fast forward sequence contains a number of steps. The steps have headers that describe the action to be taken and then a mix of icons providing more detail below the action header:

- Magnifying glass   ⚲   Where to look in the cockpit to find an item
- Document   🖹   Important details about the current step
- Mouse   🖱   How to interact with an item using the mouse
- Keyboard   ⌨   How to interact with an item using the keyboard

Outline of a step:

     1. **Action to be taken**
         ⚲   Body reference > control panel/screen > button/switch/dial/gauge
         🖹   Further information about the action being taken
         🖱   Left click, right click, or scroll on a button/switch/dial
         ⌨   Default keybind here - [Default keymapping found in Falcon BMS launcher here]

The mouse and keyboard controls shown are separate options to achieve the same result, allowing you to use either method.

In Falcon BMS 4.37, the mouse icon starts off as a yellow X and turns into a green crosshair when it is held over an interactive item in the cockpit.

The large square screens in the cockpit (multi-function displays) are surrounded by buttons. Do not click on the screens themselves. Instead, click on the buttons near the on-screen icons. For instance, if an 'up arrow' icon is displayed, click the physical button next to it to activate it.

Default keymappings can be found by selecting KEYMAPPING in the Falcon BMS launcher. Copy the keymapping (without brackets) from a step and paste it into the "Filter" field to quickly locate the specific keymapping. If there is a default keybind present for a step, you can also press the keybind on your keyboard in the KEYMAPPING screen to quickly find the keymapping.

Fast Forward Sequences

"General Dynamics F-16 'Fighting Falcons'" by aeroman3 is marked with CC0 1.0.

Ground - Ramp Start

Goal: The aircraft is fully powered down, canopy open, and you want to start it up and get it ready to taxi.

Mission: Tactical Engagement > TR_BMS_01_GroundOPS > RAMP

1. **Close canopy**
   - 📍 Left knee > yellow latch hanging down > small gray switch just to the left of yellow latch
   - 📄 The small gray switch is part of the base mount of the yellow latch and is hard to spot
   - 📄 Try using the keyboard control first, this will activate the switch making it more visible
   - 🖱 Right click and hold the small gray switch until the canopy is fully closed
   - ⌨ Alt + W - [LEFT WALL: CANOPY - Close]

2. **Lock canopy**
   - 📍 Left knee > yellow latch hanging down > yellow latch base joint
   - 📄 The clickable area of the yellow latch is near its rounded top part
   - 🖱 Left click on the yellow latch near its top part where it joins into its base
   - ⌨ No default keybind - [LEFT WALL: SPIDER - Lock]

3. **MAIN PWR**
   - 📍 Left thigh > ELEC panel > big 3-way switch
   - 🖱 Left click 2 times on the big 3-way switch to set it to MAIN PWR
   - ⌨ No default keybind - [ELEC: MAIN PWR Switch - MAIN]

4. **ENG FEED NORM**
   - 📍 Left butt cheek > FUEL panel > ENG FEED dial
   - 🖱 Mouse wheel up on the ENG FEED dial to set it to NORM
   - ⌨ No default keybind - [FUEL: ENG FEED Knob - NORM]

5. **AIR SOURCE NORM**
   - 📍 Right thigh > AIR COND panel underneath right arm rest > AIR SOURCE dial
   - 📄 The AIR SOURCE dial is hidden under the grey arm rest, move the view around to spot it
   - 🖱 Mouse wheel up on the AIR SOURCE dial to set it to NORM
   - ⌨ No default keybind - [AIR: AIR SOURCE Knob - NORM]

6. **JET FUEL START 2**
   - 📍 Left thigh > ENG & JET START panel > JET FUEL switch
   - 📄 The ENG & JET START panel is mostly hidden by the throttle
   - 📄 The JET FUEL switch is at the top of the panel and should be visible, but can be hard to spot
   - 🖱 Right click on the JET FUEL switch to set it to START 2
   - ⌨ No default keybind - [ENG: JFS Switch - START 2]

7. **UHF BOTH**

- 🖐 Left thigh > UHF panel > bottom left dial
- 🖱 Mouse wheel up on the bottom left dial to set it to BOTH
- ⌨ No default keybind - [UHF: FUNCTION Knob - BOTH]

8. **COMM 1 & 2 max volume**

- 🖐 Left thigh > AUDIO 1 panel > COMM 1 & 2 dials
- 🖱 Mouse wheel up on the COMM 1 & 2 dials until set to max volume
- ⌨ Shift / Ctrl + Right Bracket - [AUDIO 1: COMM 1 / 2 Knob - Volume Incr.]

9. **Wait for RPMs to reach 25% and SEC light off**

- 🖐 Right armpit > lower right side gauges > RPM PERCENT gauge > first green line
- 🖐 Right knee > LED fault panel > SEC light > SEC light goes off when RPMs reach 20%

10. **Throttle idle**

- 🖐 Left thigh > throttle > big horizontal trigger on front of throttle
- 🖱 Left click on big horizontal trigger on front of throttle
- ⌨ Alt + I - [TQS: CUTTOFF RELEASE - Idle Detent - Toggle]

11. **Wait for HYD/OIL PRESS & ENGINE lights off, FTIT between 5 and 6**

- 🖐 Right armpit > sloped LED panel > HYD/OIL PRESS & ENGINE lights > both lights off
- 🖐 Right armpit > lower right side gauges > FTIT gauge > between 5 and 6
- 📄 Engine noise will get quieter and various gauges will kick on at 60% RPMs

12. **RWR SYSTEM POWER**

- 🖐 Left knee > 3 AMP / DIM panel > lower right POWER button
- 🖱 Left click on POWER button, green SYSTEM POWER light comes on
- ⌨ Alt + NumPad 0 - [TWA: POWER Button - Toggle]

13. **RWR ON, JMR ON, CH ON, FL ON**

- 🖐 Left knee > CMDS panel > switches
- 🖱 Left click on RWR, JMR, CH, FL to set them to ON
- ⌨ Ctrl + Alt A - [CMDS: RWR Switch - Toggle Power]
- ⌨ Ctrl + Alt S - [CMDS: JMR Switch - Toggle Power]
- ⌨ Ctrl + Alt H - [CMDS: CH Switch - Toggle Power]
- ⌨ Ctrl + Alt J - [CMDS: FL Switch - Toggle Power]

14. **MODE SEMI**

- 🖐 Left knee > CMDS panel > MODE dial
- 🖱 Mouse wheel up on MODE dial to set it to SEMI
- ⌨ No default keybind - [CMDS: MODE Knob - SEMI]

15. SYMBOLOGY INC

- Left knee > HMCS panel > SYMBOLOGY dial
- Mouse wheel up on SYMBOLOGY dial to set it to INC
- Right Bracket - [HMCS: HMCS Knob - Brightness Incr.]

16. IFF NORM

- Left butt cheek > IFF panel > MASTER dial
- Mouse wheel up on MASTER dial to set it to NORM
- No default keybind - [AUX: MASTER Knob - NORM]

17. C & I UFC

- Left butt cheek > IFF panel > C & I dial
- Mouse wheel up on C & I dial to set it to UFC
- No default keybind - [AUX: CNI Knob Switch - UFC]

18. LEFT/RIGHT HDPT ON, FCR ON, ALT RADAR BARO, RDR ALT STDBY

- Right knee > SNSR PWR panel > switches
- Left click on left/right HDPT and FCR, ALT RADAR to BARO, RDR ALT to STDBY
- Ctrl + Shift X - [SNSR: LEFT HDPT Switch - Toggle]
- Ctrl + Shift Z - [SNSR: RIGHT HDPT Switch - Toggle]
- Ctrl + Shift C - [SNSR: FCR Switch - Toggle]
- No default keybind - [HUD: Altitude Switch - BARO]
- No default keybind - [SNSR: RDR ALT Switch - STDBY]

19. ENGINE AUTO

- Right butt cheek > ANTI ICE panel > ENGINE switch
- Left click on ENGINE switch to set it to AUTO
- No default keybind - [ICE: ENGINE Switch - AUTO]

20. MMC ON, ST STA ON, MFD ON, UFC ON, GPS ON, DL ON

- Right butt cheek > AVIONICS POWER panel > switches
- Left click on MMC, ST STA, MFD, UFC, GPS (if present), and DL to set them to ON
- Ctrl + Alt C - [AVIONICS: FCC Switch - Toggle]
- Ctrl + Alt V - [AVIONICS: SMS Switch - Toggle]
- Ctrl + Alt B - [AVIONICS: MFD Switch - Toggle]
- Ctrl + Alt N - [AVIONICS: UFC Switch - Toggle]
- Ctrl + Alt M - [AVIONICS: GPS Switch - Toggle]
- Ctrl + Alt Comma - [AVIONICS: DL Switch - Toggle]

21. EGI NORM

- 🔦 Right butt cheek > AVIONICS POWER panel > EGI dial
- 🖱 Mouse wheel up on EGI dial to set it to NORM
- ⌨ No default keybind - [AVIONICS: INS Knob - NORM]

22. Wait about 10 seconds, set MIDS LVT to ON

- 🔦 Right butt cheek > AVIONICS POWER panel > MIDS LVT dial
- 🖱 Mouse wheel up on MIDS LVT dial to set it to ON
- ⌨ No default keybind - [AVIONICS: MIDS Knob - ON]

23. OXYGEN ON

- 🔦 Right butt cheek > OXYGEN REGULATOR panel > green switch
- 🖱 Left click on green switch to set it to ON
- ⌨ Shift + O - [OXY: Setting 2 - Toggle (Pilot breathing)]

24. FLCS RESET

- 🔦 Left butt cheek > FLT CONTROL panel > FLCS RESET switch
- 🖱 Left click on the FLCS RESET switch
- ⌨ Ctrl + Alt F5 - [FLT: FLCS RESET Switch - Hold]

25. TEST CLEAR

- 🔦 Left armpit > square screen > TEST button on bottom of screen
- 🖱 Left click on TEST button to enter TEST page
- 🖱 Left click on CLR button to clear TEST page
- 🖱 Left click on TEST button to exit TEST page
- ⌨ Ctrl + Alt NumPad 4 - [LMFD: OBS-14 Button - Push]
- ⌨ Ctrl + Alt 3 - [LMFD: OBS-3 Button - Push]

26. BIT TEST

- 🔦 Left butt cheek > FLT CONTROL panel > BIT switch
- 🖱 Left click on the BIT switch, RUN light turns on while testing, takes a while to run
- ⌨ Ctrl + Alt F6 - [FLT: BIT Switch - Push]

27. DTE LOAD

- 🔦 Left armpit > square screen > DTE button on right side of screen
- 🖱 Left click on DTE button to enter DTE page
- 🖱 Left click on LOAD button to load data cartridge, takes a while to load
- 🖱 Left click on FCR button to exit DTE page and enter FCR
- ⌨ Ctrl + Alt 8 - [LMFD: OBS-8 Button - Push]
- ⌨ Ctrl + Alt 3 - [LMFD: OBS-3 Button - Push]
- ⌨ Ctrl + Alt NumPad 2 - [LMFD: OBS-12 Button - Push]

28. **SYM UP**
   - 📍 Chest > phone pad panel > SYM scroll wheel
   - 🖱 Mouse wheel up on the SYM scroll wheel to increase HUD brightness
   - ⌨ Ctrl + Shift NumPad Plus - [ICP: SYM Wheel - Increase HUD Brightness]

29. **ECM ON**
   - 📍 Left thigh > ECM panel > OPR switch
   - 🖱 Left click on the OPR switch until it is set to OPR
   - ⌨ Ctrl + Alt W - [ECM: OPR Switch - Toggle]

30. **Ejection seat armed**
   - 📍 Left knee > EJECTION CONTROLS ARMED lever > just to left of seat
   - 📄 The clickable area of the lever is just to right of the lever. Try using the keyboard control first.
   - 🖱 Right click on EJECTION CONTROLS ARMED lever to arm ejection seat
   - ⌨ Shift + E - [SEAT: Safety Lever - Toggle]

31. **Confirm ALIGN blinking in HUD and RDY blinking in small screen**
   - 📍 HUD > lower left > ALIGN present and blinking
   - 📍 Right armpit > small screen next to phone pad panel > RDY present and blinking
   - 📄 It can take a few minutes before ALIGN and RDY will start blinking

32. **Alignment procedure 1**
   - 📍 Chest > phone pad panel > LIST button
   - 🖱 Left click on LIST button 2 times
   - 🖱 Left click on 0 button
   - 🖱 Left click on RCL button
   - 🖱 Left click on SEQ on right side of square switch near bottom of panel
   - 🖱 Left click on 0 button
   - ⌨ F4 - [ICP: LIST Button - Push]
   - ⌨ NumPad 0 - [ICP: 0-M-SEL Button - Push]
   - ⌨ NumPad Del - [ICP: RCL Button - Push]
   - ⌨ Right Arrow - [ICP: DCS SEQ (Right) - Push]

33. **Confirm crosshair alignment, wait until ALIGN OK**
   - 📍 HUD > center > crosshair
   - 📍 Helmet visor > center > crosshair
   - ⌨ Insert - [TQS: RDR CURSOR - Cursor Enable]

34. Alignment procedure 2

- Keep crosshairs aligned
- This process can be ran through quickly, it isn't followed by alignment confirmation
- Left click on 0 button 2 times, FA DX DY appears on HUD, click on 0 button again
- Left click on 0 button, FA DROLL appears on HUD, click on 0 button again
- Left click on RTN on right side of square switch near bottom of panel
- NumPad 0 - [ICP: 0-M-SEL Button - Push]
- Left Arrow - [ICP: DCS RTN (Left) - Push]

35. EGI NAV

- Right butt cheek > AVIONICS POWER panel > EGI dial
- Mouse wheel up on EGI dial to set it to NAV
- No default keybind - [AVIONICS: INS Knob - NAV]

36. COM 1 UHF 2 - GROUND

- Chest > phone pad panel > COM 1 button
- Left click on COM 1
- Left click on 2
- Left click on ENTR
- F1 - [ICP: COM1 Button - Push]
- NumPad 2 - [ICP: 2-ALLOW Button - Push]
- NumPad Enter - [ICP: ENTER Button - Push]

37. Contact Ground - Request QNH and adjust altimeter

- Crotch > gauge to the top right > small black dial to lower left of gauge
- Press T six times to ATC COMMANDS - COMMON, then press 1
- Mouse wheel up or down on small black dial to set QNH as reported by ATC
- T - [RADIO: ATC Menu]
- Alt + Shift Apostrophe - [MAIN: Altimeter Pressure Knob - Incr. (1°)]
- Alt + Shift SemiColon - [MAIN: Altimeter Pressure Knob - Decr. (1°)]

38. Contact Ground - Remove EPU Ground Safety Pin

- Upper right side of screen > [GROUND] EPU SAFETY PIN IN PLACE
- Press T one time to ATC COMMANDS - GROUND, then press 1
- T - [RADIO: ATC Menu]
- 1

39. Contact Ground - Remove Chocks

- Upper right side of screen > [GROUND] CHOCKS IN PLACE
- Press T one time to ATC COMMANDS - GROUND, then press 2
- T - [RADIO: ATC Menu]
- 2

40. **Enable nose wheel steering**
   - HUD > little vertical LED stack to the right of HUD > Green AR/NWS light
   - Shift + Forward Slash - [STICK: NWS A/R DISC MSL STEP SWITCH]

Ground - Ramp Start Summary

1. Close canopy

2. Lock canopy

3. MAIN PWR

4. ENG FEED NORM

5. AIR SOURCE NORM

6. JET FUEL START 2

7. UHF BOTH

8. COMM 1 & 2 max volume

9. Wait for RPMs to reach 25% and SEC light off

10. Throttle idle

11. Wait for HYD/OIL PRESS & ENGINE lights off, FTIT between 5 and 6

12. RWR SYSTEM POWER

13. RWR ON, JMR ON, CH ON, FL ON

14. MODE SEMI

15. SYMBOLOGY INC

16. IFF NORM

17. C & I UFC

18. LEFT/RIGHT HDPT ON, FCR ON, ALT RADAR BARO, RDR ALT STDBY

19. ENGINE AUTO

20. MMC ON, ST STA ON, MFD ON, UFC ON, GPS ON, DL ON

21. EGI NORM

22. Wait about 10 seconds, set MIDS LVT to ON

23. OXYGEN ON

24. FLCS RESET

25. TEST CLEAR

26. BIT TEST

27. DTE LOAD

28. SYM UP

29. ECM ON

30. Ejection seat armed

31. Confirm ALIGN blinking in HUD and RDY blinking in small screen

32. Alignment procedure 1

33. Confirm crosshair alignment, wait until ALIGN OK

34. Alignment procedure 2

35. EGI NAV

36. COM 1 UHF 2 - GROUND

37. Contact Ground - Request QNH and adjust altimeter

38. Contact Ground - Remove EPU Ground Safety Pin

39. Contact Ground - Remove Chocks

40. Enable nose wheel steering

Ground to Air - Taxi and Takeoff

Goal: The aircraft is powered up, and you want to taxi it on the runway and take off.

Mission: Tactical Engagement > TR_BMS_01_GroundOPS > TAXI

1. **Confirm UHF is set to channel 2**
   - ⚲ Right armpit > small rectangle screen to right of phone pad panel > UHF channel
   - ⚲ Chest > phone pad panel > COM 1 button
   - 🗎 Confirm that UHF is set to channel 2 on the small rectangle screen
   - 🖰 Left click on COM 1
   - 🖰 Left click on 2
   - 🖰 Left click on ENTR
   - ⌨ F1 - [ICP: COM1 Button - Push]
   - ⌨ NumPad 2 - [ICP: 2-ALLOW Button - Push]
   - ⌨ NumPad Enter - [ICP: ENTER Button - Push]

2. **Contact Ground - Request Taxi for Departure**
   - 🗎 Press T one time to ATC COMMANDS - GROUND, then press 3
   - 🗎 Follow ATCs orders, they will say when to wait/go and when to change radio channels
   - ⌨ T - [RADIO: ATC Menu]
   - ⌨ 3

3. **Confirm nose wheel steering is enabled**
   - ⚲ HUD > little vertical LED stack to the right of HUD > Green AR/NWS light
   - 🗎 Confirm that AR/NWS light is lit
   - ⌨ Shift + Forward Slash - [STICK: NWS A/R DISC MSL STEP SWITCH]

4. **Confirm safety pin is removed**
   - ⚲ Upper right side of screen > [GROUND] EPU SAFETY PIN IN PLACE
   - 🗎 Confirm that [GROUND] EPU SAFETY PIN IN PLACE is not visible on screen
   - 🗎 Press T one time to ATC COMMANDS - GROUND, then press 1
   - ⌨ T - [RADIO: ATC Menu]
   - ⌨ 1

5. **Confirm chocks are removed**
   - ⚲ Upper right side of screen > [GROUND] CHOCKS IN PLACE
   - 🗎 Confirm that [GROUND] CHOCKS IN PLACE is not visible on screen
   - 🗎 Press T one time to ATC COMMANDS - GROUND, then press 2
   - ⌨ T - [RADIO: ATC Menu]
   - ⌨ 2

6. Monitor ground speed

- 👤 Chest > phone pad panel > LIST button
- 👤 Right armpit > small rectangle screen to right of phone pad panel > G/S value, lower right
- 🖱 Left click on LIST
- 🖱 Left click on 6
- ⌨ F4 - [ICP: LIST Button - Push]
- ⌨ NumPad 6 - [ICP: 6-TIME Button - Push]

7. Taxi

- 📄 Slowly increase throttle, watch speed, stay below 25 knots on straights and 5 knots on turns
- 📄 Taxi up to the runway as directed by ATC, by following the yellow line
- 📄 Stop at the yellow and black line before heading out onto the runway
- 📄 You should be contacted by Ground to switch over to Tower comms

8. RDR ALT ON

- 👤 Right knee > SNSR PWR panel > switches
- 🖱 Left click 2 times on RDR ALT to ON (forward position)
- ⌨ No default keybind - [SNSR: RDR ALT Switch - ON]

9. Confirm that ejection seat is armed

- 👤 Left knee > EJECTION CONTROLS ARMED lever > just to left of seat
- 📄 Confirm that the EJECTION CONTROLS ARMED lever is down
- 📄 The EJECTION CONTROLS ARMED lever might be down if you start mission from TAXI
- 🖱 Right click on EJECTION CONTROLS ARMED lever to arm ejection seat
- ⌨ Shift + E - [SEAT: Safety Lever - Toggle]

10. COM 1 UHF 3 - TOWER

- 👤 Chest > phone pad panel > COM 1 button
- 🖱 Left click on COM 1
- 🖱 Left click on 3
- 🖱 Left click on ENTR
- ⌨ F1 - [ICP: COM1 Button - Push]
- ⌨ NumPad 3 - [ICP: 3 Button - Push]
- ⌨ NumPad Enter - [ICP: ENTER Button - Push]

11. **Contact Tower - Ready for Departure**
- 🗐 Press T two times to ATC COMMANDS - TOWER, then press 1
- 🗐 Follow ATC's orders
- 🗐 If you request to takeoff earlier than scheduled, you may need to repeat this step
- ⌨ T - [RADIO: ATC Menu]
- ⌨ 1

12. **Line up on the runway**
- 🗐 Taxi out onto the runway, try to line up in the center, and then stop

13. **STPT 2**
- 👆 Chest > phone pad panel > square switch at center-bottom
- 👆 Chest > phone pad panel > rocker switch lower left
- 🖱 Left click on RTN on right side of square switch
- 🖱 Left click on up arrow of rocker switch
- ⌨ Left Arrow - [ICP: DCS RTN (Left) - Push]
- ⌨ NumPad Add - [ICP: NEXT Button - Push]

14. **Disable nose wheel steering**
- 👆 HUD > little vertical LED stack to the right of HUD > green AR/NWS light
- 🗐 Confirm that AR/NWS light is off
- ⌨ Shift + Forward Slash - [STICK: NWS A/R DISC MSL STEP SWITCH]

15. **Takeoff**
- 👆 HUD > left side > speed indicator > **180** ▷
- 🗐 Slowly increase the throttle to full, maintain center line with rudder controls
- 🗐 Once the speed indicator has reached about 180 gently pull back on stick to take off

16. **Raise landing gear**
- 👆 Left knee > panel with little jet drawing on it > LG lever
- 🗐 After the LG lever has been raised, it will glow while the landing gear is raising
- 🖱 Right click on LG lever
- ⌨ G - [GEAR: LG Handle - Toggle]

17. **Wait for departure call from tower**
   - 🗎 Tower should call in and ask you to contact departure

18. **COM 1 UHF 4 - DEPARTURE**
   - 🖈 Chest > phone pad panel > COM 1 button
   - 🖱 Left click on COM 1
   - 🖱 Left click on 4
   - 🖱 Left click on ENTR
   - ⌨ F1 - [ICP: COM1 Button - Push]
   - ⌨ NumPad 4 - [ICP: 4-STPT Button - Push]
   - ⌨ NumPad Enter - [ICP: ENTER Button - Push]

19. **Contact Departure - Report Airborne**
   - 🗎 Press T five times to ATC COMMANDS - DEPARTURE, then press 1
   - ⌨ T - [RADIO: ATC Menu]
   - ⌨ 1

Ground to Air - Taxi and Takeoff Summary

1. Confirm UHF is set to channel 2

2. Contact Ground - Request Taxi for Departure

3. Confirm nose wheel steering is enabled

4. Confirm safety pin is removed

5. Confirm chocks are removed

6. Monitor ground speed

7. Taxi

8. RDR ALT ON

9. Confirm that ejection seat is armed

10. COM 1 UHF 3 - TOWER

11. Contact Tower - Ready for Departure

12. Line up on the runway

13. STPT 2

14. Disable nose wheel steering

15. Takeoff

16. Raise landing gear

17. Wait for departure call from tower

18. COM 1 UHF 4 - DEPARTURE

19. Contact Departure - Report Airborne

Air to Ground - Basic Navigation and Landing

Goal: The aircraft is airborne, and you want to follow the navigation points for the mission, then land and taxi back to its parking spot.

Mission: Tactical Engagement > TR_BMS_01_GroundOPS > RUNWAY
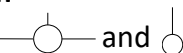
Alternate Mission: Tactical Engagement > TR_BMS_03_Landing

Note: Follow steps 10 - 11 and 14 - 19 in the *"*Ground to Air - Taxi and Takeoff*"* sequence to become airborne for this sequence. Alternatively, if you just want to practice landing, TR_BMS_03_Landing is a good mission to use as it starts you in the air ready to land at Gunsan airport.

1. **Zoom out on HSD screen to view entire navigation path**
   - 📍 Right armpit > square screen > yellow up arrow, left side of screen
   - 📄 The nav path consists of white lines and nav points, fly along the lines to each nav point
   - 📄 If you do not see the up arrow icon or nav path, try pressing the "HSD" button
   - 🖱 Left click on the up arrow button a few times so the entire nav path is visible
   - ⌨ Alt + Shift NumPad 0 - [RMFD: OBS-20 Button - Push]
   - ⌨ Alt + Shift NumPad 2 - [RMFD: OBS-12 Button - Push]

2. **Find and align aircraft icon with heading icon**
   - 📍 HUD > aircraft and heading icons > —◯— and ◌̩
   - 📄 Fly so that the aircraft icon overlaps the heading icon: —◎—
   - 📄 The line on top of the heading icon points towards the next nav point

3. **Double check heading**
   - 📍 Crotch > lowest center panel > compass gauge with aircraft in center
   - 📄 The blue arrow on the top outer ring points to the next nav point
   - 📄 When the blue arrow is pointed directly up you are on course

4. **Check nav point icon**
   - 📍 HUD > nav point icon > ◇
   - 📄 You can also check for the nav icon in the HUD to quickly confirm your heading
   - 📄 The nav icons in the HUD are tethered to the ground, so fly over them not into them

5. **STPT auto**
   - Chest > phone pad panel > number 4 (STPT)
   - Chest > phone pad panel > square switch at center-bottom
   - Right armpit > small rectangle screen to right of phone pad panel > STPT number
   - When STPT is set to auto the STPT number will have an A after it like so: 1A
   - Auto STPT will automatically change to the next nav point when you reach the current one
   - Left click on number 4 (STPT)
   - Left click on SEQ on right side of square switch
   - Left click on RTN on right side of square switch to return to the main screen
   - NumPad 4 - [ICP: 4-STPT Button - Push]
   - Right Arrow - [ICP: DCS SEQ (Right) - Push]
   - Left Arrow - [ICP: DCS RTN (Left) - Push]

6. **Manage throttle and fly through all of the nav points up to 7A**
   - Right armpit > FUEL FLOW meter
   - Right knee > FUEL meter
   - Right armpit > small rectangle screen to right of phone pad panel > STPT number
   - While flying along the nav points manage your throttle by not giving too much thrust
   - Keep fuel flow as slow as possible and fuel level as high as possible while maintaining course
   - Once you reach nav point 7A (STPT 7A) you are ready for landing

7. **Confirm visual of runway**
   - When you are at nav point 7A, you should be able to see nav point 8A to the north
   - The runway is to the left of nav point 8A

8. **COM 1 UHF 4 - APPROACH**
   - Chest > phone pad panel > COM 1 button
   - Left click on COM 1
   - Left click on 4
   - Left click on ENTR
   - F1 - [ICP: COM1 Button - Push]
   - NumPad 4 - [ICP: 4-STPT Button - Push]
   - NumPad Enter - [ICP: ENTER Button - Push]

9. **Contact Approach - Request Unrestricted Approach**
   - Press T three times to ATC COMMANDS - APPROACH 1, then press 6
   - T - [RADIO: ATC Menu]
   - 6

10. **Confirm QNH**
- 🔍 Crotch > gauge to the top right > small black dial to lower left of gauge
- 📄 ATC should report QNH as 2984, only adjust QNH on gauge if different from ATC reporting
- 🖱 Mouse wheel up or down on small black dial to set QNH as reported by ATC
- ⌨ Alt + Shift Apostrophe - [MAIN: Altimeter Pressure Knob - Incr. (1°)]
- ⌨ Alt + Shift SemiColon - [MAIN: Altimeter Pressure Knob - Decr. (1°)]

11. **Wait for call to contact tower**
- 📄 After a short time, ATC should call in and ask you to contact tower

12. **COM 1 UHF 3 - TOWER**
- 🔍 Chest > phone pad panel > COM 1 button
- 🖱 Left click on COM 1
- 🖱 Left click on 3
- 🖱 Left click on ENTR
- ⌨ F1 - [ICP: COM1 Button - Push]
- ⌨ NumPad 3 - [ICP: 3 Button - Push]
- ⌨ NumPad Enter - [ICP: ENTER Button - Push]

13. **Contact Tower - Request Landing**
- 📄 Press T two times to ATC COMMANDS - TOWER, then press 2
- ⌨ T - [RADIO: ATC Menu]
- ⌨ 2
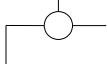
14. **Contact Tower - Report On Final**
- 📄 Press T two times to ATC COMMANDS - TOWER, then press 2
- ⌨ T - [RADIO: ATC Menu]
- ⌨ 4

15. **Reduce speed to about 290 and lower landing gear**
- 🔍 HUD > left side > speed indicator > 290 ⟩
- 🔍 Left knee > panel with little jet drawing on it > LG lever
- 📄 Speeds above 300 can potentially damage the landing gear
- 📄 Speed reduction can be further controlled by activating the speed brakes with B
- 📄 After the LG lever has been lowered, it will glow while the landing gear is lowering
- 📄 The clickable area for the LG lever is just below the actual lever
- 📄 Use keyboard controls first, then try finding the clickable area with the mouse
- 🖱 Left click on LG lever
- ⌨ G - [GEAR: LG Handle - Toggle]
- ⌨ B - [TQS: SPD BRAKE Switch - Toggle]

16. **Align landing bracket with left wing of aircraft icon and approach runway**
    - HUD > center > landing bracket >
    - HUD > center > aircraft icon >
    - After landing gear is deployed, the landing bracket should appear in the HUD
    - Maintain speed and altitude so that the left wing of the aircraft icon touches landing bracket
    - Fly so that the aircraft icon is pointed near the beginning of the runway
    - Alignment for landing:

17. **Touch down, lower throttle, nose up slightly, begin braking after nose drops**
    - HUD > little vertical LED stack to the left of HUD > green circle
    - After touching down, lower throttle all the way down and try to keep the nose up slightly
    - When the LED stack to the left of the HUD shows a green circle the nose is at a good angle
    - After gravity begins to pull the nose down, let off pitch control slowly and allow it to drop
    - After the nose wheel has touched down, begin braking in 1 - 3 second increments
    - K - [CKPIT: Wheel Brakes - Hold]

18. **Enable nose wheel steering**
    - HUD > little vertical LED stack to the right of HUD > Green AR/NWS light
    - Shift + Forward Slash - [STICK: NWS A/R DISC MSL STEP SWITCH]

19. **COM 1 UHF 2 - GROUND**
    - Chest > phone pad panel > COM 1 button
    - Left click on COM 1
    - Left click on 2
    - Left click on ENTR
    - F1 - [ICP: COM1 Button - Push]
    - NumPad 2 - [ICP: 2-ALLOW Button - Push]
    - NumPad Enter - [ICP: ENTER Button - Push]

20. **Contact Ground - Request Taxi Back to Ramp**
    - Press T one times to ATC COMMANDS - GROUND, then press 4
    - T - [RADIO: ATC Menu]
    - 4

21. **Return to ramp**
    - Location of runway maps in Falcon BMS folder: Docs\03 KTO Charts\01 South Korea\Gunsan
    - Ground will tell you which ramp to go to, for instance: ECHO, PAPA, CHARLIE 0 5
    - Open the Gunsan_Airport.png map and follow the lettered paths (e.g. E > P > C)
    - Open the Gunsan_APC_RWY[36 OR 18].png map and park in the numbered hanger/space
    - The satellite camera is useful to use to find matching paths/parking locations in-game
    - ` - [VIEWEXT: Satellite Camera]

Air to Ground - Basic Navigation and Landing Summary

1. Zoom out on HSD screen to view entire navigation path

2. Find and align aircraft icon with heading icon

3. Double check heading

4. Check nav point icon

5. STPT auto

6. Manage throttle and fly through all of the nav points up to 7A

7. Confirm visual of runway

8. COM 1 UHF 4 - APPROACH

9. Contact approach - Request Unrestricted Approach

10. Confirm QNH

11. Wait for call to contact tower

12. COM 1 UHF 3 - TOWER

13. Contact Tower - Request Landing

14. Contact Tower - Report On Final

15. Reduce speed to about 290 and lower landing gear

16. Align landing bracket with left wing of aircraft icon and approach runway

17. Touch down, lower throttle, nose up slightly, begin braking after nose drops

18. Enable nose wheel steering

19. COM 1 UHF 2 - GROUND

20. Contact Ground - Request Taxi Back to Ramp

21. Return to ramp

Gun

Goal: Shoot down an aircraft with your gun.

Mission: Tactical Engagement > TR_BMS_19_Guns

Note: The mission starts with your visor down, to put it back up use Alt+V - [CKPIT: Visor - Toggle]. While using the gun is a simple process, using it to actually hit a moving target is more difficult. It will require you to practice leading your target using the targeting funnel as a guide, and timing your shots in bursts.

1. **Fly to target aircraft**
   - 📄 Immediately push the throttle to full
   - 📄 The target aircraft will be flying out in the distance just to the left of the HUD, use zoom
   - 📄 Fly up on it and your initial approach will be from behind the enemy aircraft
   - ⌨ L - [VIEWGEN: Look Closer - Toggle]

2. **Switch to dogfight override mode**
   - 📄 Dogfight override mode will display a funnel in the HUD
   - 📄 Fly so that the target is contained within the targeting funnel
   - 📄 The goal is to have the target's wingtips touching the lines of the funnel
   - 📄 The farther the target is, the lower it should be in the funnel when you fire
   - 📄 The closer the target is, the higher it should be in the funnel when you fire
   - ⌨ D - [TQS: DOGFIGHT Switch - DF Override]

3. **Optional - establish target lock**
   - 📄 When you are ready to fire on the target, you can establish a lock
   - 📄 The gun can be fired without a target lock but a locked target is easier to track
   - ⌨ Shift + Home - [STICK: TMS Up]

4. **Fire on target**
   - 📄 Attempt to line the target up in the funnel and fire on it
   - ⌨ Alt + / - [STICK: SECOND TRIGGER DETENT]

Missile

Goal: Shoot down an aircraft with an air to air missile.

Mission: Tactical Engagement > TR_BMS_19_Guns

Note: The mission starts with your sun visor down, to put it back up use Alt+V - [CKPIT: Visor - Toggle]. There are several different types of missiles with different use cases. The aircraft is using the AIM-9X Sidewinder in this mission.

1. **Choose a target on left square screen**
   - ⚲   Left armpit > square screen > cursor > | |²⁷₀₄
   - 📄   Immediately push the throttle to full
   - 📄   Move the cursor over the white target icon using shift and the arrow keys
   - ⌨   Shift + Up - [TQS: RDR CURSOR - Up]
   - ⌨   Shift + Down - [TQS: RDR CURSOR - Down]
   - ⌨   Shift + Left - [TQS: RDR CURSOR - Left]
   - ⌨   Shift + Right - [TQS: RDR CURSOR - Right]

2. **Lock onto target on left square screen**
   - ⚲   Left armpit > square screen > target icon > ■   (target icon is white on the square screen)
   - 📄   Once the cursor is over the target icon, lock onto it
   - 📄   When the target is locked in the square screen, a square will be placed over it in the HUD
   - ⌨   Shift + Home - [STICK: TMS Up]

3. **Acquire target in HUD**
   - ⚲   HUD > center circle > ◯
   - ⚲   HUD > target square > ☐
   - 📄   Once the target square is in the center circle in the HUD you are on-target
   - 📄   You can zoom in to get a better visual of the target
   - ⌨   L - [VIEWGEN: Look Closer - Toggle]

4. **Uncage missile**
   - ⚲   HUD > caged missile sensor diamond > ◇
   - ⚲   HUD > uncaged missile sensor diamond > ◇
   - 📄   Uncage the missile and the targeting diamond will change from small to large
   - ⌨   U - [TQS: MAIN RANGE Knob - UNCAGE]

5. **Close distance to target**
   - ⚲   HUD > center circle > ◯
   - 📄   The center circle will begin to flash when the target is getting in range
   - 📄   When the center circle is flashing, begin cooling the missile

6. **Cool missile**

- ⚲ Right armpit > square screen > WARM button
- ⚲ HUD > uncaged missile sensor diamond > ◇
- 🖹 Cooling the missile improves its accuracy but there is limited coolant
- 🖹 When the WARM button is clicked it should change to COOL, indicating the missile is cooled
- 🖹 After the missile is cooled its sensor diamond should reposition directly over the target
- 🖱 Left click on the WARM button
- ⌨ Alt + Shift + 8 [RMFD: OSB-8 Button - Push]

7. **Fire missile**

- 🖹 When the missile sensor diamond is directly over the target and squealing, fire the missile
- 🖹 If the missile is within range, uncaged, and cooled when it is fired it has a high chance to hit
- ⌨ Space - [STICK: WEAPON RELEASE (Pickle)]

Bomb

Goal: Perform a basic bomb drop.

Mission: Tactical Engagement > TR_BMS_11_LGB

Note: The mission starts in the late evening and quickly gets dark so using nightvision to confirm ground targets may be useful. You can use nightvision by pressing N - [CKPIT: Nightvision - Toggle]. There are many different types of bombs with different features and use cases. The aircraft is using the GBU12B/B /HE in this mission.

1. **Choose a target on left square screen**
   - Left armpit > square screen > targeting cursor >
   - Left armpit > square screen > white blobs which represent buildings
   - Move the targeting cursor up on the screen to make the radar scan a larger area
   - Eventually you will see white blobs which represent buildings in cities
   - Left click the up arrow button on the left side of the left square screen to increase scan area
   - Ctrl + Alt NumPad 0 - [LMFD: OBS-20 Button - Push]
   - Shift + Up - [TQS: RDR CURSOR - Up]
   - Shift + Down - [TQS: RDR CURSOR - Down]
   - Shift + Left - [TQS: RDR CURSOR - Left]
   - Shift + Right - [TQS: RDR CURSOR - Right]

2. **Lock onto target on left square screen**
   - Left armpit > square screen > targeting cursor >
   - Left armpit > square screen > white blobs which represent buildings
   - Move the targeting cursor over a white blob and lock onto it
   - Shift + Home - [STICK: TMS Up]

3. **Acquire target in HUD**
   - HUD > bottom > target square >
   - Once the target square on the ground is in view in the bottom of the HUD you are on-target
   - You can zoom in to get a better visual of the target
   - L - [VIEWGEN: Look Closer - Toggle]

4. **Lineup crosshairs in HUD and close distance to target**
   - HUD > long horizontal/vertical crosshairs > horizontal crosshair has a cutout for aircraft icon
   - HUD > aircraft icon >
   - Line the aircraft icon up with the large horizontal and vertical crosshairs and hold level
   - Flying level and on-target with aircraft icon centered between crosshairs:

5. **Wait for countdown bar to appear in HUD, then drop bomb**
- HUD > right side > countdown bar > **25**⟩
- Once you are near the target, the countdown bar will appear on the right side of the HUD
- When the countdown appears, hold down the weapon release button until the bomb drops
- The bomb will automatically drop when countdown reaches zero
- Space - [STICK: WEAPON RELEASE (Pickle)]

6. **Confirm bomb hit**
- After you drop the bomb, fly around or use different camera modes to confirm the hit
- Try using nightvision, weapon camera, and satellite camera to confirm the bomb hit
- N - [CKPIT: Nightvision - Toggle]
- Shift + 7 - [VIEWEXT: Weapon Camera]
- ` - [VIEWEXT: Satellite Camera]

<u>Weapons Summary</u>

Gun

1. Fly to target aircraft

2. Switch to dogfight override mode

3. Optional - establish target lock

4. Fire on target

Missile

1. Choose a target on left square screen

2. Lock onto target on left square screen

3. Acquire target in HUD

4. Uncage missile

5. Close distance to target

6. Cool missile

7. Fire missile

Bomb

1. Choose a target on left square screen

2. Lock onto target on left square screen

3. Acquire target in HUD

4. Lineup crosshairs in HUD and close distance to target

5. Wait for countdown bar to appear in HUD, then drop bomb

6. Confirm bomb hit